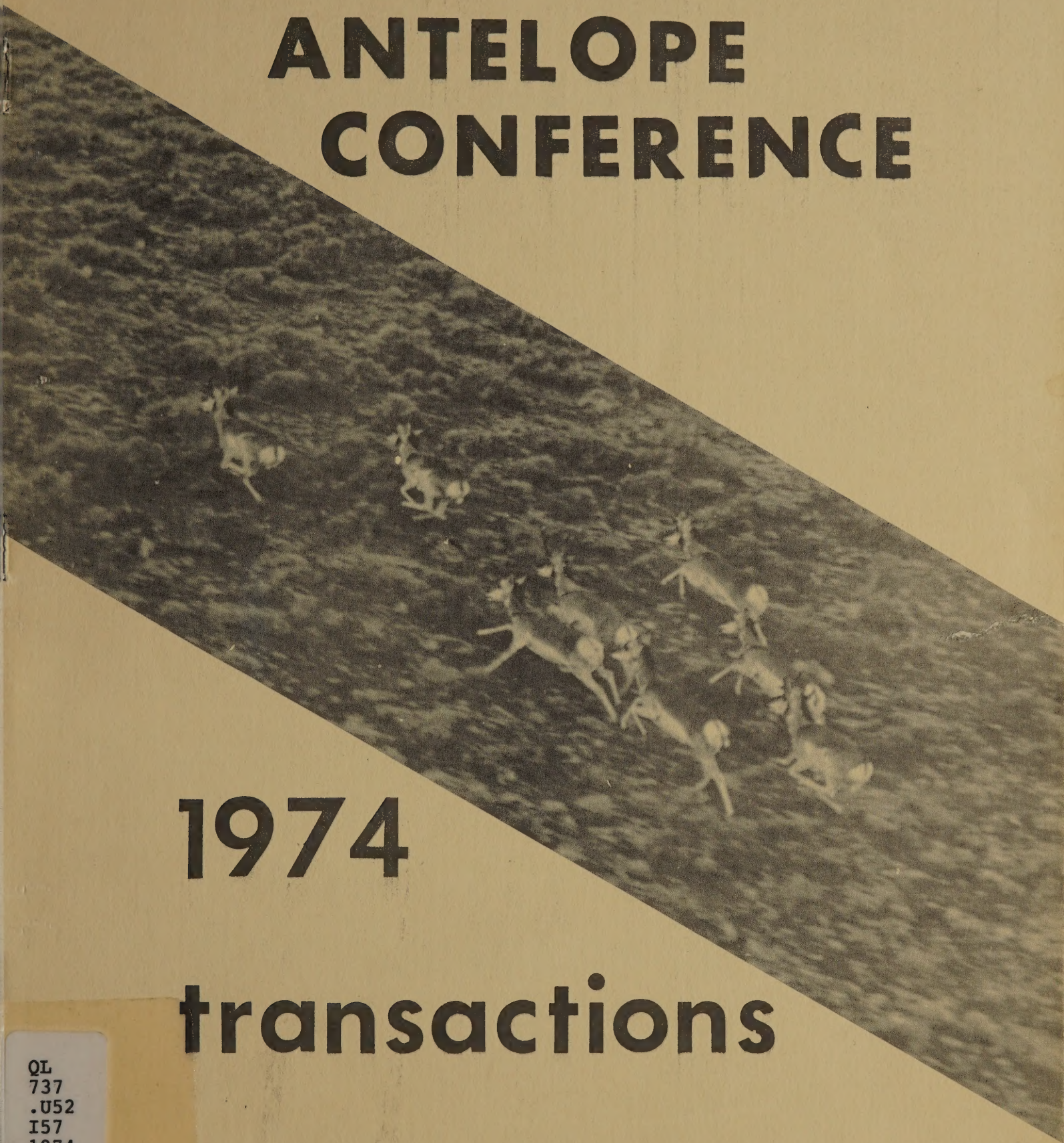
INTERSTATE ANTELOPE CONFERENCE



1974 transactions

INTERSTATE ANTELOPE CONFERENCE

1974 TRANSACTIONS

Papers presented at the annual meeting held in Alturas, California on March 11, 1975 are included in these transactions.

compiled by

NEVADA DEPARTMENT OF FISH AND GAME

These transactions are available from the chairman. Conference members, antelope project workers, and educational institutions may obtain copies subject to a very limited supply.

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E. O'Neill

Chairman:

Mike Hess
Nevada Department of Fish and Game
P. O. Box 10678
Reno, Nevada 89510

Cover Photo:

Robert Oakleaf

CONFERENCE GUIDELINES

1. The annual meeting will be held on the second Tuesday in March, at Alturas, California. The 1975 meeting will be held on March 9, 1976.

2. The chairmanship of the conference will rotate between the four representing agencies. The Oregon State Game Commission will provide the 1975 Chairman, with B.S.F.W., California and Nevada following in that order. The 1975 Chairman will be responsible for conducting the March 1976 meeting.

3. Each contributing agency shall provide 100 unstapled copies of their formal presentation. These shall be on standard 8½ x 11 paper with pages unnumbered, printed single space on one side only, and with a margin of 1½ inches for binding. The first page of the report shall carry the title, author's name, author's title, and organization.

4. The Chairman is responsible for compilation of the Conference Transactions covering that period for which he serves.

5. Transactions will be distributed in accordance with standing requests of participating agencies. Additional requests from other agencies, departments, and bureaus shall be honored at the discretion of the Chairman subject to availability. Added requests received by Conference members should be forwarded to the Chairman with a "Send" or "No Send" recommendation. Distribution of the 1974 Transactions was as follows:

AGENCY	NO. COPIES
California Department of Fish and Game 1416 Ninth Street Sacramento, California 95814	15
Nevada Department of Fish and Game P. O. Box 10678 Reno, Nevada 89510	15
Oregon State Game Commission P. O. Box 3503 Portland, Oregon 97208	15

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Oregon State Game Commission P. O. Box 1390 Portland, Oregon 97207	15

AGENCY	NO. COPIES
Bureau of Land Management Federal Office Building 2800 Cottage Way, Room E-2820 Sacramento, California 95825	4
Bureau of Land Management 300 Booth Street Reno, Nevada 89502	6
Bureau of Land Management P. O. Box 2965 Portland, Oregon 97208	5
Modoc National Forest Alturas, California 96101	6
Fremont National Forest P. O. Box 551 Lakeview, Oregon 97630	2
Bureau of Sport Fisheries and Wildlife P. O. Box 111 Lakeview, Oregon 97630	10
National Park Service Klamath Falls Group P. O. Box 128 Klamath Falls, Oregon 97601	2

6. The current Chairman shall notify the following as to the time and place of the Conference. These individuals will have the responsibility for notifying those interested parties in his particular jurisdiction as to the time and place of the meeting.

NAME	AGENCY	ADDRESS
Director	Nevada Department of Fish and Game	P. O. Box 10678 Reno, Nevada 89510
Paul Ebert	Oregon State Game Commission	P. O. Box 3503 Portland, Oregon 97208
Dave Luman	Bureau of Land Management	P. O. Box 2965 Portland, Oregon 97208

AGENCY	NO. COPIES
Bureau of Land Management Federal Office Building 2800 Cottage Way, Room E-2820 Sacramento, California 95825	4
Bureau of Land Management 300 Booth Street Reno, Nevada 89502	6
Bureau of Land Management P. O. Box 1945 Portland, Oregon 97208	5
Modoc National Forest Alturas, California 96101	6
Fremont National Forest P. O. Box 151 Lakeview, Oregon 97630	2
Bureau of Sport Fisheries and Wildlife P. O. Box 111 Lakeview, Oregon 97630	10
National Park Service Klamath Falls Group P. O. Box 122 Klamath Falls, Oregon 97601	2

5. The correct Quantum shall notify the Authority as to the time and place of the Conference. These individuals will have the responsibility for notifying those interested parties in his particular jurisdiction as to the time and place of the meeting.

TITLE	AGENCY	ADDRESS
Director	Nevada Department of Fish and Game	P. O. Box 10678 Reno, Nevada 89510
Fish Chief	Oregon State Game Commission	P. O. Box 1171 Portland, Oregon 97208
Data Liaison	Bureau of Land Management	P. O. Box 2965 Portland, Oregon 97208

Vic Masson	Oregon State Game Commission	P. O. Box 8 Hines, Oregon 97738
Stan Thompson	California Department of Fish and Game	P. O. Box 1480 Redding, CA. 96001
Refuge Manager	Sheldon-Hart Mountain Refuges	P. O. Box 111 Lakeview, Oregon 97630
Refuge Manager	Klamath Basin National Wildlife Refuges	Route 1, Box 74 Tulelake, CA 96134
Superintendent	Lava Beds National Monument	P. O. Box 867 Tulelake, CA 96134
Forest Supervisor	Fremont National Forest	P. O. Box 551 Lakeview, Oregon 97630
W. M. Shaw	Idaho Department of Fish and Game	P. O. Box 25 Boise, Idaho 83707
Bill Radtky	Bureau of Land Management	Federal Office Building 2800 Cottage Way Room E-2820 Sacramento, CA 95825
Forest Supervisor	Modoc National Forest	Alturas, CA 96101
Jim Yoakum	Bureau of Land Management	300 Booth Street Reno, Nevada 89502
Superintendent	National Park Service Klamath Falls Group	P. O. Box 128 Klamath Falls, Oregon 97601

Vic Meason	Oregon State Game Commission	P. O. Box 3 Ulmes, Oregon 97738
Stan Thompson	California Department of Fish and Game	P. O. Box 1480 Redding, CA. 96001
Refuge Manager	Malheur-Harney Mountain Refuge	P. O. Box 111 Lakeview, Oregon 97630
Refuge Manager	Klamath Basin National Wildlife Refuge	Route 1, Box 74 Tulelake, CA 96134
Superintendent	Lava Beds National Monument	P. O. Box 867 Tulelake, CA 96134
Forest Supervisor	Fremont National Forest	P. O. Box 331 Lakeview, Oregon 97630
W. M. Shaw	Idaho Department of Fish and Game	P. O. Box 25 Boise, Idaho 83707
Bill Bailey	Bureau of Land Management	Federal Office Building 2800 Cottage Way Room E-1820 Sacramento, CA 95825
Forest Supervisor	Modoc National Forest	Alturas, CA 96101
Jim Yoakum	Bureau of Land Management	370 North Street Elko, Nevada 89801
Superintendent	National Park Service Klamath Falls Group	P. O. Box 129 Klamath Falls, Oregon 97601

ATTENDANCE ROSTER

NAME	AGENCY	ADDRESS
Jim Blaisdell	National Park Service	Klamath Falls, OR
Clark Bloom	Fish and Wildlife Service	Alturas, CA
Ronald Escano	Forest Service	Tulelake, CA
Leon Fisher	Forest Service	Alturas, CA
Terry Gladwin	Fish and Wildlife Service	Plush, OR
Will Griffin	Forest Service	Alturas, CA
Paul Haertel	National Park Service	Lava Beds N. M., CA
Mike Hess	Nevada Fish and Game	Reno, NV
Duane Koss	Fish and Wildlife Service	Lakeview, OR
Ellis Mason	Oregon Wildlife Commission	Hines, OR
Eldon McLaury	Fish and Wildlife Service	Lakeview, OR
Hank Newhause	Forest Service	Cedarville, CA
Edward O'Neill	Fish and Wildlife Service	Tulelake, CA
Hal Salwasser	University of California	Klamath Falls, OR
Douglas Thayer	California Fish and Game	Alturas, CA
Stan Thompson	California Fish and Game	Redding, CA

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Leon Fisher	Forest Service	Alturas, CA
Terry Gladwin	Fish and Wildlife Service	Ft.Bragg, CA
Will Grifflin	Forest Service	Alturas, CA
Tool Hoover	National Park Service	Lava Beds N. M., CA
Mike Kane	Nevada Fish and Game	Reno, NV
Duane Kane	Fish and Wildlife Service	Lakeview, OR
Gilla Kenn	Oregon Wildlife Commission	Hines, OR
Blake Mahaney	Fish and Wildlife Service	Lakeview, OR
Dave Newhouse	Forest Service	Cedarville, CA
Edward O'Neill	Fish and Wildlife Service	Tulelake, CA
Hal Valentzer	University of California	Klamath Falls, OR
Douglas Thayer	California Fish and Game	Alturas, CA
Sean Thompson	California Fish and Game	Redding, CA

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME

I. Herd Surveys

A. Annual Census

California's annual aerial census was conducted on January 20, 21, 22, 23 and 24, 1975. Census procedure was the same as has been used in previous years. All known antelope winter ranges in Modoc, Lassen, Shasta and Siskiyou Counties were covered.

Patchy snow conditions existed on most winter ranges. Counting conditions ranged from extremely poor to good. Antelope were concentrated on winter ranges in numerous groups. Many groups contained less than 100 animals.

Four thousand one hundred nine (4,109) antelope were counted in the basic California population during the 1975 census. No antelope were found on California ranges in Surprise Valley. However, an estimated 400 antelope were noted several miles inside Nevada, east of the causeway on Highway 299.

B. Buck Doe Ratio

The 1974 aerial herd composition survey in northeastern California was conducted July 22, 23, 24, 25 and 26, 1974. The aerial survey technique has remained basically unchanged since 1954. However, for the second year, all known antelope summering areas were not checked.

Two thousand seven hundred eleven (2,711) antelope were classified during the 1974 survey. The buck ratio was 26 bucks per 100 does. This ratio is down 8 bucks per 100 does from the 1973 ratio and is 10 bucks per 100 does below the five-year average. The 1974 buck ratio is the lowest on record. The decline in the buck ratio is attributed to lowered kid production in 1973 and buck only harvest.

C. Production

The 1974 kid to doe ratio, obtained during the summer herd composition counts, was 41 kids per 100 does. The kid ratio was down 1 kid per 100 does from the 1973 count and 13 kids per 100 does below the previous five-year average of 54 kids per 100 does.

D. Harvest

The eleventh consecutive antelope hunt was held in northeastern California from August 24, 1974 through September 2, 1974. Adult bucks only were legal. Permits were issued on a statewide drawing basis and cost $15. Four hundred ten (410) permits were issued. The hunt area, as

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by: Douglas J. Thayer, Assistant Wildlife Manager-Biologist

in past years, was divided into seven zones. All hunters were required to report on the success of their hunt. This was done by the tag and report card system used in the past.

The 1974 reported kill was 284 adult male antelope. Hunter success was 69 percent, the fourth lowest on record for the 11 hunts. Hunter success for the past 11 hunts has ranged from 59 to 80 percent with an average of 73 percent.

The yearlings in the kill decreased from 29 percent in 1973 to 16 percent in 1974. During the past nine hunts (1966 through 1974), the percent of yearlings in the kill has ranged from 12 to 36 percent. Four years and older bucks made up 38 percent of the 1974 kill. Four year and older bucks killed during the same period has ranged from 22 to 42 percent.

Hunting permit quotas, except for the Surprise Valley area, are based on 75 percent of the surplus bucks. Surplus bucks are those over and above the minimum needed for breeding purposes. The minimum needed for breeding purposes has been arbitrarily set at 20 bucks per 100 does. Permit quotas for the Surprise Valley area are based on summer herd composition data only.

For the fourth consecutive year an antelope hunting orientation session was held in Alturas on the day before the hunt began. Attendance at the session was good. There were 130 people at the 1974 session, at least 78 of these were permit holders. The sessions have proved to be an exceptional public relations medium.

One exceptional trophy was reported taken in the Clear Lake area. The horns were reported to be proportionately large with respective lengths of 17 5/8 inches and 17 1/2 inches.

During the past 11 years California has issued 3,400 antelope permits. Hunters have killed 2,489 antelope for a success ratio of 73 percent. Antelope numbers are 57 percent higher in 1975 than they were in 1964 when the current series of hunts began.

California Department of Fish and Game is requesting a special antelope hunt for 1975. The request calls for 225 permits with regulations to be basically the same as in 1974.

II. Range Surveys

A. Weather Conditions

Seasonal precipitation was below normal. Periodic snowfall occurred on winter ranges during the winter of 1973-74. Spring precipitation and temperatures were below normal.

B. Range Modification

None specifically for antelope.

C. Range Evaluation

Overall range conditions for 1973-74 were poor to fair.

III. Miscellaneous

A. Disease

No disease occurrence reported in 1974.

One male antelope carcass was examined near Clear Lake. The animal was two-years-old and in good physical condition at time of death. The animal had been dead approximately two days when examined. The carcass was examined in August 1974. It had been found by a citizen on August 10, 1974, very shortly after death. Cause of death could not be determined.

B. Tagging

No tagging or marking was done in 1974.

Kidding grounds are being located and mapped. Procedure involves overflights over all known antelope ranges during the kidding period.

IV. Summary

The 1975 census showed the basic antelope population in northeastern California to be 4,109 animals. This represents a decrease of 638 animals or 13 percent from the 1974 census. However, the 1975 total is the third highest on record and is 131 percent higher than the low population year of 1960.

The buck to doe ratio for 1974 was 26 bucks per 100 does. This is down 8 bucks per 100 does from 1973 and is the lowest buck ratio of record in California. The 1974 kid ratio was 41 kids per 100 does. This is down 1 kid per 100 does from 1973 and is 13 kids per 100 does below the previous five-year average.

The eleventh consecutive adult buck only hunt was held in 1974. Four hundred ten (410) permits were issued. Hunters reported killing 284 antelope for a success ratio of 69 percent. Hunter success for the 11 hunts has averaged 73 percent.

The following tables show current data with comparative information from previous years.

TABLE I

Winter Aerial Census in Northeastern California

Year	Total Counted	*Erratic Winter Populations	Basic California Populations
1953	2247	122	2125
1954	2022	172	1850
1955	2137	180	1957
1956	2338	0	2338
1957	2080	107	1973
1958	2165	0	2165
1959	1917	0	1917
1960	1961	181	1780
1961	2068	162	1906
1962	2354	85	2269
1963	2498	123	2375
1964	2618	0	2618
1965	2468	0	2468
1966	2898	163	2735
1967	2665	128	2537
1968	2607	0	2607
1969	2971	101	2870
1970	2999	16	2983
1971	3800	0	3800
1972	3764	0	3764
1973	4357	0	4357
1974	4747	0	4747
1975	4109	0	4109

*Erratic winter populations occupying interstate ranges east of the Warner Mountains subtracted from total, leaves the basic California population.

TABLE II

Antelope Herd Composition Summary

Year	Population	Bucks:Does:Kids			No. Classified
1954	1850	58	100	84	689
1955	1957	52	100	77	1020
1956	2338	51	100	57	927
1957	1973	58	100	66	861
1958	2165	59	100	70	1390
1959	1917	46	100	53	1496
1960	1780	32	100	39	1079
1961	1909	44	100	64	1042
1962	2269	39	100	42	1493
1963	2375	44	100	62	1721
1964	2618	47	100	57	1918
1965	2468	44	100	52	1592
1966	2735	35	100	40	1718
1967	2537	40	100	58	1963
1968	2607	39	100	61	2025
1969	2870	37	100	69	2336
1970	2983	35	100	63	2779
1971	3800	41	100	40	3089
1972	3764	33	100	55	3289
1973	4357	34	100	42	2769
1974	4747	26	100	41	2711

TABLE III

Buck Antelope Kill by Season

Year	Permits Issued	Reported Kill	Hunter Success Ratio
1942	500	405	.81
1943	500	362	.72
1944	500	322	.64
1945	500	307	.61
1949	500	349	.70
1951	416	280	.67
1959	171	120	.70
1964	240	183	.76
1965	240	141	.59
1966	265	179	.68
1967	250	159	.64
1968	260	189	.73
1969	270	204	.76
1970	300	241	.80
1971	400	303	.76
1972	380	301	.79
1973	385	305	.79
1974	410	284	.69

NORTHWESTERN NEVADA ANTELOPE STUDIES
MIKE HESS
GAME AGENT II
NEVADA DEPARTMENT OF FISH AND GAME

I. HERD SURVEYS

A. Annual Census

Aerial surveys conducted in March, 1974, counted a record total of 2,244 antelope. This is an increase of 365 animals or 19.4% from 1973. Increases were encountered in all units except the Kings River Unit which showed a slight decrease. Generally, less flight time was required to obtain unit samples.

Table I presents the five-year population trend by unit.

B. Buck-Doe Ratio

A buck-doe ratio of 34 bucks per 100 does was obtained during 1974 summer production surveys. This represents a decrease in the ratio although more bucks were counted. Since the number of does classified increased 15%, this decline in ratio does not seem significant.

C. Production

A total of 1,751 antelope were classified during aerial production surveys in early August, 1974. The composition of the sample was 343 bucks, 1007 does and 401 kids yielding a ratio of 34/100/40. Production remained similar to that found in 1973, and again, was well below long term averages. Also, considerable variation was found in the number of antelope censused in the Washoe County units compared with recent years. These differences appear to represent inter-unit shifts due to drier range conditions.

Table II summarizes the 1974 production by unit.

The population trend count and the annual production ratio obtained in 1974 was again negatively correlated.

D. Harvest

The 1974 regular antelope season ran from August 24 through September 2. Demand for tags was again high, but decreased considerably as an apparent result of further administrative changes in the application procedure. A total of 2,140 applications were received for the 355 tags available on a statewide basis. Within the northwestern Nevada units, a total of 250 tags were again available, although some changes in unit totals were made in order to adjust to the available antelope resources.

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A total of 249 tag holders reported harvesting 189 antelope for an overall success of 76%. This represents an eight animal or 4% decrease from the 1973 harvest. A return card was not received from one hunter and two tag holders reported that they did not hunt. Table III summarizes the 1974 regular season harvest by unit.

An antelope archery season was held again in 1974. Two hundred tags were available on a statewide basis excluding the Sheldon. A total of five animals were reported taken in northwestern Nevada.

A check station was operated at Gerlach during the opening weekend of the regular season. A total of 62 antelope were examined at the station. Additional data was received on four more antelope after the season ended. Estimated ages were recorded using incisor replacement, green Boone and Crockett scores were taken and an incisor was extracted where possible. No weights were obtained.

Of 64 antelope aged, 10.9% were yearlings, 21.9% were two-year-olds, 12.5% were three-year-olds and 54.7% were four years or older. This distribution varies from that found in 1973. Most notable of these variations is in the three-year-old age class which contributed 26.8% of the antelope checked in 1973. This year's lower percentage probably reflects the extremely poor production which occurred in 1971.

Comparing trophy quality with age, seven yearings had an average Boone and Crockett score of 55, fourteen two-year-olds averaged 64 6/8, seven three-year-olds averaged 70 3/8 and thirty-five animals four years and older averaged 71 4/8. The average score for 66 animals, regardless of age, was 68 3/8.

Sectioning of incisors collected in 1973 and 1974 has not yet been accomplished.

II. RANGE SURVEYS

A. Weather-Precipitation

Precipitation averaged well below normal during 1974 in northwestern Nevada, and mild weather occurred during the kidding season. Range conditions were considerably drier than has been encountered in recent years.

B. Range Modifications

No brush spraying was known to have taken place.

No observations concerning exotic forb introductions were made in Washoe County. Informal observations made in the Washburn seeding near McDermitt in Humboldt County indicated fair to good establishment of dry land alfalfas. These plants were heavily

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grazed, but the animal user was uncertain.

An additional 1,800 acres were burned in the Santa Rosa Mountains. Again, forbs and grasses responded well. Crown sprouting occurred in most brush species, however, in this and the earlier burns, no bitterbrush sprouting has occurred. Wildlife responses have not yet been documented.

C. Range Evaluations

Range conditions and trend vary considerably throughout northwestern Nevada. The Bureau of Land Management districts administering various portions of the area assess range conditions to be predominately fair or poor. The range trend was judged to be static for the majority of the area. Conditions of slight to moderate erosion are reported to be occurring on most of the watersheds.

In those grazing systems in operation, wildlife responses have not yet been noted. Planning of grazing systems for future implementation is occurring, but actual establishment of systems in many of the various grazing allotments will not be realized in the immediate future. Under current federal funding levels, a minimum of twenty years for completion has been estimated.

III. MISCELLANEOUS EVALUATION

A. Disease

None was reported in 1974.

B. Predation

No direct observations of active predation were made or reported in 1974. Of interest, relative indices of coyote abundance obtained through scent station transects established by the Wildlife Services Division of the U.S. Bureau of Sports Fisheries and Wildlife, seemingly indicate that some of the highest coyote densities in Nevada occur in eastern Humboldt County. Transect results in Washoe County apparently indicate populations to be near average for the state.

The collection of coyote stomachs on the Owyhee Desert was discontinued.

C. Food Habits

Rumen samples from 1969 remain unanalyzed.

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IV. SUMMARY OF DATA

A. Antelope populations appear to have expanded to record numbers.

B. Production remained below average and was similar to that of 1973.

C. The negative correlation between population size and productivity was again obtained.

D. Harvest levels remained similar.

E. Range conditions remained stable and generally poor.

F. Predator influences remain undetermined.

V. RECOMMENDATIONS

A. Continue to emphasize quality in antelope hunting.

B. Continue to attempt to determine the impact of all density-dependent variables.

C. Initiate analysis of on hand rumen samples and collect samples during other seasons.

D. Determine seasonal movement patterns and the extent of seasonal ranges.

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TABLE I
POPULATION TREND

UNIT	1970	1971	1972	1973	1974
New Year Lake	80	6	119	0	126
Hart Camp	320	490	566	924	934
Smoke Creek	343	699	338	338	404
Summit Lake	140	146	200	234	266
Kings River	131	158	152	154	147
Santa Rosa	159	218	228	229	367
TOTAL:	1,173	1,717	1,603	1,879	2,244

TABLE II
HERD COMPOSITION (1974)

UNIT	NO. CLASSIFIED	BUCKS	DOES	KIDS	B/100 D	K/100 D
New Year Lake	287	27	177	83	15	47
Hart Camp	608	143	332	133	43	40
Smoke Creek	440	110	227	103	48	45
Summit Lake	115	15	76	24	20	32
Kings River	81	13	58	10	22	17
Santa Rosa	220	35	137	48	26	35
TOTAL:	1,751	343	1,007	401	34	40

TABLE III
HARVEST (1974)

UNIT	NO. TAGS	RETURNS	HARVEST	UN-SUCCESSFUL	DID NOT HUNT	% SUCCESS
New Year Lake	25	25	17	8	0	68
Hart Camp	65	65	54	11	0	83
Smoke Creek	65	65	50	14	1	78
Summit Lake	35	34	25	9	0	74
Kings River	15	15	9	6	0	60
Santa Rosa	25	25	15	9	1	63
Sheldon	20	20	19	1	0	95
TOTAL:	250	249	189	58	2	76%

TABLE I
POPULATION TREND

UNIT	1970	1971	1972	1973	1974
New Year Lake	80	6	119	0	126
Hart Camp	320	490	566	924	934
Smoke Creek	243	699	338	338	404
Summit Lake	140	146	200	234	266
Kings River	131	158	152	154	147
Santa Rosa	159	218	226	229	367
TOTAL:	1,173	1,717	1,603	1,879	2,244

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Hart Camp	65	65	54	11	0	83
Smoke Creek	65	65	50	14	1	78
Summit Lake	35	34	25	9	0	74
Kings River	15	15	9	6	0	60
Santa Rosa	25	25	15	9	1	63
Shelton	20	20	19	1	0	95
TOTAL:	250	249	189	58	2	76%

OREGON ANTELOPE REPORT - 1974

Al Polenz, Wildlife Biologist
Oregon Wildlife Commission

I. Herd Survey

A. Annual Census

Most of the 1974 aerial census was completed by the middle of March. However, some counts were terminated before completion because of unsettled weather which delayed flying until after dispersal of some of the herds. A total of 7,930 antelope was observed on the 3,725 miles flown. The average of 2.1 antelope per miles is nine percent below the 1973 figure of 2.3 but 17.0 percent above the 10 year average of 1.8 antelope per mile. (Tables I and II.)

B. Buck-Doe Ratios

A total of 2,060 antelope was classified prior to the mid-August hunting season. The low fawn survival of 1973 was evidently responsible for a lowered 1974 buck ratio. The 24 bucks per 100 does was 17 percent below the 29 bucks per 100 does recorded in 1973, and 23 percent below the 10-year average of 31 bucks per 100 does. (Tables III and IIIa.)

C. Production

The 34 kids per 100 does observed during August herd composition work was a recovery of 30 percent from the record low of 26 kids per 100 does recorded in 1973. However, this ratio is still 11.0 percent below the 10-year average of 38 kids per 100 does.

D. Harvest

Report cards returned by 74 percent of the 1,711 tag holders indicated an estimated harvest of 712 buck antelope during the five day mid-August season. The 53 percent hunter success compares to the 54 percent success of 1973.

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C. Production

The 14 kids per 100 does observed during August herd composition work was a recovery of 30 percent from the record low of 10 kids per 100 does recorded in 1973. However, this ratio is still 11.0 percent below the 10-year average of 18 kids per 100 does.

D. Harvest

Report cards returned by 74 percent of the 1,711 tag holders indicated an estimated harvest of 712 buck antelope during the five day mid-August season. The 53 percent hunter success compares to the 54 percent success of 1973.

A total of 1,590 permits were issued for the general rifle season and 121 tags were issued for the Gerber Reservoir archery seasons. No antelope were taken by the archers.

II. Range Surveys

A. Weather Conditions - Precipitation

The 1973-74 winter was near average throughout most of Oregon's antelope range. Winter temperatures were average or slightly above average, while precipitation ranged from normal to slightly below normal.

There was sufficient forage and water on the high desert ranges to allow dispersal of antelope throughout their normal summer range. Water held into the fall months in most areas.

B. Range Modification

Sagebrush conversion projects in Oregon antelope range still continues but at a greatly reduced rate from that of five to ten years ago.

There were a few wildfires during the summer of 1974, but none on any rangeland supporting other than a few scattered animals.

Big Lake Controlled Burn

A controlled burn was attempted during July, 1974, on Bureau of Land Management land southwest of Adel, Oregon. The Big Lake area contains several vegetative types including juniper-sagebrush ridge, big sagebrush and low sagebrush flats. The purpose of the burn was to simulate natural wildfire conditions and then measure native vegetation response in subsequent years. Additionally, antelope and deer use of the area will be measured. No seeding is planned. Two attempts at burning was made, but a complete burn of the 900 acre area was never accomplished because of lack of fuel, wind, etc. The Big Lake burn, as well as several wildfire areas of recent years, will be monitored to attempt determination of the impact that such burns may have on the resident antelope populations.

A total of 1,590 permits were issued for the general rifle season and 111 tags were issued for the Gerber Reservoir archery seasons. No antelope were taken by the archers.

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III. Miscellaneous

A. Diseases, Parasites, Predation

No evidence of mortality from disease or parasite was found. An extremely weak kid (male) weighing eight and one-half pounds was picked up in Bear Valley on May 29, 1974. The kid was unable to rise and nurse, so was transported to the Veterinary Diagnostic Laboratory at Oregon State University. It died before reaching O.S.U. The necropsy record revealed the following: "Penetrating wounds on right side of head (dorsal to ear). Left mandible fractured at base of vert. ramus, left mandible fractured in midshaft, and fracture of mandibular symphysis. Absecess at right mandibular facture." The tentative diagnosis was "malnutrition secondary to trauma (predator attack?); fawn unable to nurse".

IV. Summary

A. The population index was down nine percent from that of 1973, and 17 percent below the 10-year average. A total of 7,930 antelope was counted on 3,725 miles of aerial census route.

B. A 17 percent decrease in the buck ratio evidently was a reflection of the extremely poor kid survival of 1973. The 1974 buck ratio was 24 per 100 does. The kid ratio, as measured in early August, was 34 per 100 does. This was a 30 percent increase from the 1973 figure of 26 kids per 100 does.

C. Estimated buck harvest for 1974 was 712, which was a slight decrease from the 749 animals taken in 1973. A total of 1,711 tags were issued. This included 121 archery tags for the Gerber Reservoir area. Reported hunter success was 53 percent, compared to 54 percent experienced in 1973. No antelope was reported taken by the archers.

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V. Recommendations

A. Monitor and analyze results of the Big Lake controlled burn and wildfire of previous years. Attempt determination of the effects which burning and/or the range rehabilitation projects have on antelope use of the treated areas.

B. Actively pursue the cause of developing interest and financial aid to study the problem of low antelope kid survival on our desert ranges. Small isolated herds such as those found in Bear Valley and Summit Prairie are good comparison areas because of their relatively high kid survival.

Table 1

1974 AERIAL ANTELOPE INVENTORY

Unit	District	Miles	Antelope	Antelope per Mile 1974	1973	10-Year Average
Beulah	Malheur	190	472	2.5	2.7	2.5
Ft. Rock-Silver Lake	Lake	225	212	0.9	0.6	0.7
Beatys Butte	Harney	900	1,986	2.2	2.4	2.5
Interstate	Lake	50	103	2.1	1.7	1.1
Juniper	Harney	240	474	2.0	2.3	
	Lake	*	-	-	4.5	
Total		-	-	-	2.7	1.5
Malheur	Harney	140	660	4.7	5.4	2.4
Maury	Deschutes	200	143	0.7	0.8	
	Ochoco	125	654	5.2	3.0	
Total		325	797	2.5	1.6	1.5
Murderer's Cr.	Harney	40	112	2.8	2.8	-
Ochoco	Ochoco	125	202	1.6	1.9	1.7
Owyhee	Malheur	*175	774	4.4	4.5	2.5
Paulina-Wagontire	Deschutes	200	279	1.4	1.5	
	Deschutes	250	563	2.3	2.3	
	Harney	60	29	0.5	0.3	
	Lake	*	-	-	7.3	
Total		-	-	-	2.0	1.4
Silvies	Ochoco	125	178	1.4	1.5	
	Harney	60	85	1.4	1.0	
Total		185	263	1.4	1.3	1.2
Steens Mt.	Harney	220	491	2.2	2.1	1.1
Warner	Lake	*	-	-	4.6	3.7
Whitehorse	Malheur	400	513	1.3	1.2	1.1
TOTALS & AVERAGES		3,725	7,930	2.1	2.3	1.8

*Routes not completed due to weather conditions.

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Boatys Butte	Harney	900	1,986	2.2	2.4	2.5
Interstate	Lake	50	105	2.1	1.7	1.1
Juniper	Harney	240	474	2.0	2.3	
	Lake	-	-	-	1.5	
Total		-	-	-	2.7	1.5
Malheur	Harney	140	660	4.7	5.4	2.4
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Warner	Lake	*	-	-	4.6	3.7
Whitehorse	Malheur	100	115	1.5	1.2	1.1
TOTALS & AVERAGES		3,725	7,950	2.1	2.3	1.8

*Routes not completed due to weather conditions.

Table II

History of Antelope Population Trends

Year	Antelope observed	Miles traveled	Antelope per mile
1974	7,930	3,725	2.1
1973	9,270	4,090	2.3
1972	8,627	4,075	2.1
1971	8,055	3,375	2.4
1970	8,244	4,150	2.0
1969	6,326	4,150	1.5
1968	7,298	4,250	1.7
1967	7,593	4,125	1.8
1966	6,010	4,000	1.5
1965	5,859	3,775	1.6
1964	6,056	4,205	1.4
1963	6,068	3,900	1.6
1962	3,925	3,905	1.3
1961	3,865	3,445	1.1
1960	5,712	3,725	1.5
1959	5,465	3,645	1.5
1958	4,916	3,694	1.3
1957	4,846	3,644	1.3
1956	2,804	1,949	1.4
1955	4,773	3,343	1.4
1954	7,061	3,589	2.0
Averages	6,224	3,750	1.7
20 Year averages:			
(1954-73)	6,139	3,752	1.6

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1972	8,627	4,075	2.1
1971	8,055	3,375	2.4
1970	8,244	4,150	2.0
1969	6,326	4,150	1.5
1968	7,298	4,250	1.7
1967	7,593	4,125	1.8
1966	6,010	4,000	1.5
1965	5,859	3,775	1.6
1964	6,058	4,205	1.4
1963	6,068	3,900	1.6
1962	3,925	3,905	1.3
1961	3,865	3,445	1.1
1960	5,712	3,725	1.5
1959	5,465	3,645	1.5
1958	4,915	3,694	1.3
1957	4,844	3,644	1.3
1956	2,804	3,945	1.4
1955	4,773	3,341	1.4
1954	7,001	3,509	2.0
Averages	6,224	3,750	1.7
20 Year averages:			
(1954-73)	6,139	3,732	1.6

Table III

Antelope Herd Composition

Year	Bucks	Does	Kids	Total	Per 100 Does Bucks	Per 100 Does Kids
1974	340	1,394	472	2,060	24	34
1973	464	1,582	413	2,459	29	26
1972	554	2,004	747	3,305	28	37
1971	584	1,692	498	2,774	35	29
1970	483	1,521	715	2,719	32	48
1969	292	1,138	562	1,992	26	49
1968	308	1,265	509	2,068	24	40
1967	285	917	290	1,492	31	32
1966	298	1,029	436	1,763	31	40
1965	269	879	343	1,491	31	39
1964	412	854	432	1,698	48	51
1963	355	887	581	1,823	40	66
1962	321	785	452	1,558	41	57
1961	214	770	347	1,331	28	45
1960	326	942	555	1,823	35	59
1959	393	806	361	1,560	50	45
1958	274	711	551	1,536	39	77
1957	203	608	493	1,304	33	81
1956	236	542	320	1,098	44	59
1955	194	455	268	917	43	59
1954	350	730	477	1,557	48	65
1953	417	950	589	1,956	44	62
1952	419	952	470	1,841	44	49
1951	334	694	417	1,445	48	60
1950	371	612	555	1,538	63	91

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1974	340	1,394	472	2,060	24	34
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1967	285	917	290	1,492	31	32
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1965	269	879	343	1,491	31	39
1964	412	854	432	1,698	48	51
1963	355	887	581	1,823	40	66
1962	321	785	452	1,558	41	57
1961	214	770	347	1,331	28	45
1960	326	942	555	1,823	35	59
1959	393	806	361	1,560	50	45
1958	374	711	551	1,536	39	77
1957	203	608	493	1,304	33	81
1956	324	542	320	1,098	44	59
1955	194	455	268	917	43	59
1954	350	730	477	1,557	48	65
1953	417	950	589	1,956	44	62
1952	419	952	470	1,841	44	49
1951	374	894	417	1,445	42	60
1950	371	612	555	1,538	63	91

Table IIIa

1974 ANTELOPE HERD COMPOSITION

Area	Wildlife Management District	Antelope Classified				Bucks Per 100 Does			Fawns Per 100 Does		
		Bucks	Does	Fawns	Total	1974	1973	*Ave.	1974	1973	*Ave.
Beatys Butte	Harney	17	142	28	187	12	20	27	20	23	36
Beulah	Malheur						30	22		22	36
Juniper	Harney	9	61	22	92						
	Lake	5	21	9	35						
Total		14	82	31	127	17	35	35	38	20	32
Malheur	Harney	33	71	28	132						
	Malheur										
Total		33	71	28	132	46	45	33	39	19	37
Maury	Ochoco	22	55	6	83	40	-	33	11	-	30
Murderer's Cr.	Grant	22	89	51	162	25	110	54	57	58	78
Ochoco	Ochoco	49	118	75	242	42	40	33	64	67	49
Owyhee	Malheur	6	42	15	63	14	23	21	35	25	24
Paulina-Wagontire	Deschutes	15	91	7	112						
	Lake	23	80	13	116						
Total		38	171	20	228	22	19	24	12	10	31

*Six-year average - 1968-1973

1984 VARIATOPE HERD COMPOSITION

MILLILIE	MANAGEMENT DISTRICT	Variatope Classified BUCKS	DOES	FEMALE	TOTAL	Per 100 DOES BUCKS 1984	1985	*AVG.*	Per 100 DOES FEMALE 1984	1985	*AVG.*
Bearly's Dairy	Hatney	11	143	28	182	15	50	51	50	52	50
Bonish	Malpent						20	22		22	20
Lomipot	Hatney	6	21	22	56						
	Lake	5	12	6	23						
	TOTAL	14	83	31	131	13	22	22	28	30	25
Malpent	Hatney	22	17	28	123						
	Malpent										
	TOTAL	22	17	28	123	40	45	22	28	18	23
Manty	Ochoco	22	22	8	82	40	-	22	11	-	20
Midgeiet's Cr.	Grant	22	88	21	102	52	110	24	21	28	18
Ochoco	Ochoco	49	118	12	243	42	40	22	24	19	49
Owypee	Malpent	8	42	12	62	14	22	21	22	22	24
Ramilton-Mahonglie	Deschutes	12	16	1	112						
	Lake	22	80	12	110						
TOTAL		28	112	20	222	22	18	24	12	10	21

*Six-year average - 1978-1982

Table IIIa

1974 ANTELOPE HERD COMPOSITION
(Continued)

Area	Wildlife Management District	Antelope Classified				Bucks Per 100 Does			Fawns Per 100 Does		
		Bucks	Does	Fawns	Total	1974	1973	*Ave.	1974	1973	*Ave.
Ft. Rock-Silver Lake	Lake	6	31	24	61	19	33	27	77	24	38
Silvies	Harney	-	7	7	14						
	Ochoco	21	69	30	120						
Total		21	76	37	134	28	31	24	49	24	29
Steens Mtn.	Harney	36	219	58	313	16	11	38	26	18	40
Warner	Lake	26	105	13		25	26	24	12	16	34
Whitehorse	Harney	7	25	14	46						
	Malheur	43	168	72	283						
Total		50	193	86	328	26	14	23	45	30	36
TOTALS AND AVERAGES		340	1,394	472	2,060	24	29	**31	34	26	**38

*Six year average - 1968-1973
**Ten-year average - 1964-1973

Table IIIa

1974 ANTELOPE HERD COMPOSITION
(Continued)

Area	Wildlife Management District	Antelope Classified: Bucks	Does	Fawns	Total	Bucks Per 100 Does: 1974	1973	*Ave.	Fawns Per 100 Does: 1974	1973	*Ave.
Ft. Rock-Silver Lake	Lake	6	31	24	61	19	33	27	77	24	38
Silvies	Harney	-	7	7	14						
	Ochoco	21	69	30	120						
Total		21	76	37	134	28	31	24	49	24	29
Steens Mtn.	Harney	36	219	58	313	16	11	38	26	18	40
Warner	Lake	26	105	13		25	26	24	12	16	34
Whitehorse	Harney	7	25	14	46						
	Malheur	43	168	72	283						
Total		50	193	86	328	26	14	23	45	30	36
TOTALS AND AVERAGES		340	1,394	472	2,066	24	29	**31	34	30	**38

*Six year average - 1968-1973
**Ten-year average - 1964-1973

Table IV

1974 ANTELOPE SEASON

(74% Return)

Management Units	Tags Issued	Report Cards Received	Number Did Not Hunt	Number Hunted	Reported Harvest	Percent Success	Hunter -Days
Beaty's Butte	160	133	4	126	85	67%	301
Beulah	75	56	2	53	36	68%	111
Ft.Rock-Silver Lake	25	19	2	17	7	41%	35
Interstate (Lake Co.)	50	36	5	31	19	61%	73
Juniper	125	89	3	86	37	43%	251
Malheur	150	115	6	109	66	61%	260
Maury	75	48	3	45	13	29%	119
Murderer's Creek	15	15	0	15	15	100%	17
Ochoco	50	37	2	35	13	37%	92
Owyhee	150	98	5	93	44	47%	281
Paulina-Wagontire	100	69	3	66	30	45%	196
Silvies	75	55	4	51	27	53%	117
Steens Mountain	160	115	6	109	60	55%	304
Warner	115	88	8	80	29	36%	238
Whitehorse	250	190	6	184	102	55%	512
Nat'l Antelope Refuge	15	11	0	11	10	91%	22
TOTALS	1590	1174	59	1111	593	53%	2929
Gerber Reservoir Archery Seasons:							
1st Period	59	37	2	35	0	0	111
2nd Period	62	33	4	29	0	0	138

Estimated total harvest: 712

TABLE IV

1974 WATERFOWL SEASON

(144 Hunters)

Management Units	Tags Issued	Reports Cards Received	Hunt Did Not Number	Hunters Number	Harvest Reported	Success Percent	Days Hunted
Berry's Butte	100	122	4	150	82	67%	101
Bonley	15	20	2	22	20	89%	111
Ft.Rock-Silver Lake	52	19	2	17	7	41%	22
Intersteate (Lake Co.)	20	20	2	21	19	91%	17
Juniper	152	83	2	88	71	82%	121
Malheur	120	112	9	103	90	91%	300
Manly	12	48	2	45	12	26%	113
Marquart's Creek	12	12	0	12	12	100%	11
Ochoco	20	11	2	22	13	24%	25
Owyhee	120	88	2	86	44	41%	181
Paulina-Wasourite	100	63	2	88	20	42%	108
Silvies	12	22	4	21	12	22%	117
Steens Mountain	100	112	6	103	20	22%	104
Warner	112	38	8	30	23	30%	328
Wildhorse	320	180	9	184	102	22%	213
Wolf Creek Reserve	12	11	0	11	10	91%	22
TOTALS	1200	1114	58	1111	582	52%	2262

Estimated total harvest: 1112

Cooper Reservoir Waterfowl Season:

1st Period	25	21	3	22	0	0	112
2nd Period	25	22	4	20	0	0	128

1974 ANTELOPE STATUS REPORT

SHELDON-HART MOUNTAIN NATIONAL ANTELOPE REFUGES & CHARLES SHELDON ANTELOPE RANGE

Eldon L. McLaury, Assistant Refuge Manager
U. S. Fish & Wildlife Service

I. HERD SURVEYS

A. Annual Census Activities

The mid-winter aerial antelope census was completed 5 and 6 February, 1974. Census methods, dates of the census and counting conditions were comparable to 1973. We counted 1,824 antelope in 1974, 549 more than a year ago, and 357 more than the 1968-1973 (six year) average of 1,467. Table I presents results of the mid-winter census since 1968.

TABLE I. Winter Population Trends

Unit	1968	1969	1970	1971	1972	1973	1974
Hart Mtn. Biological Unit	155	0	95	85	84	90	199
Sheldon Biological Unit	1180	1340	1705	2025	857	1185	1625
Total Sheldon-Hart Mtn.	1335	1340	1800	2110	941	1275	1824

Differences between the total number of antelope counted each year (Table I), is a mystery we haven't solved. These differences are not explained by annual production variances, indicating we may not be obtaining a total herd count. Herd movement outside of the existing census area may be the problem.

The annual aerial summer herd composition census was completed 5 and 6 August, 1974. We counted 1,363 antelope, 75 less than in 1973, but 121 more than the 1968-1973 (six year) average of 1,242. Table II presents results of the summer census since 1968.

TABLE II. Summer Population Trends

Unit	1968	1969	1970	1971	1972	1973	1974
Hart Mtn. Biological Unit	432	178	508	310	454	646	496
Sheldon Biological Unit	523	949	1060	874	728	792	867
Total Sheldon-Hart Mtn.	955	1127	1568	1184	1182	1438	1363

1974 ANTELOPE STATUS REPORT

SHELDON-HART MOUNTAIN NATIONAL ANTELOPE REFUGE &
CHARLES SHELDON ANTELOPE RANGE

Eldon L. McGarry, Assistant Refuge Manager
U. S. Fish & Wildlife Service

I. HERD STATUS

A. Annual Census Activities

The mid-winter aerial antelope census was completed 3 and 4 February, 1974. Census methods, dates of the census and counting conditions were comparable to 1973. We counted 1872 antelope in 1974, 240 more than a year ago, and 357 more than the 1968-1973 (six year) average of 1,515. Table I presents results of the mid-winter census since 1968.

TABLE I. Winter Population Trends

Herd	1968	1969	1970	1971	1972	1973	1974
Hart Mtn. Biological Unit	155	0	95	85	84	90	199
Sheldon Biological Unit	1180	1340	1705	2025	857	1385	1673
Total Sheldon-Hart Mtn.	1335	1340	1800	2110	941	1475	1872

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The annual aerial summer herd composition census was completed 3 and 4 August, 1974. We counted 1,363 antelope, 75 less than in 1973, but 124 more than the 1968-1973 (six year) average of 1,242. Table II presents results of the summer census since 1968.

TABLE II. Summer Population Trends

Herd	1968	1969	1970	1971	1972	1973	1974
Hart Mtn. Biological Unit	431	276	359	320	451	546	499
Sheldon Biological Unit	521	549	1060	874	734	792	867
Total Sheldon-Hart Mtn.	952	1127	1419	1194	1184	1338	1363

B. Buck : Doe Ratios

The 1974 buck : doe ratio increased seven bucks from the historic low recorded last year, but is three bucks below the 1968-1973 (six year) average. Table III presents herd ratio data based on herd composition counts made in late July or early August since 1968.

TABLE III. Summer Herd Ratios

	1968	1969	1970	1971	1972	1973	1974
Number Classified	952	1127	1568	1184	1182	1423	1363
Bucks	207	319	351	299	261	265	328
Does	609	635	799	794	667	925	906
Kids	136	173	418	91	254	233	129
Bucks/100 Does	34	50	44	38	39	29	36
Kids/100 Does	22	27	52	11	38	25	14
Kids/100 Adults	17	18	36	8	27	20	10

C. Production

Realizing there can be difficulties in separating yearling bucks from does during aerial census activities, we added the ratio of kids : 100 adults to our herd data this year (Table III). We anticipate this ratio along with other herd data will provide a better indicator of production and herd status for management purposes.

Production ratios in 1974 declined to 10 kids : 100 adults or 14 kids : 100 does from 20 kids : 100 adults or 25 kids : 100 does in 1973 (Table III). The 1974 production ratios compare with 1971 production data, the lowest recorded since this census procedure began in 1955.

D. Harvest

Trophy buck hunting programs continued on Sheldon and Hart Mountain in 1974. Tables IV and V summarize results for each area.

TABLE IV. Summary of Sheldon Antelope Hunts

Year	No. Hunters	Successful	% Success	Boone & Crockett Scores High	Low	Average
1967	10	10	100	75-5/8	45-1/8	69-2/8
1968	10	10	100	81-2/8	64-2/8	73-6/8
1969	20	20	100	78-4/8	64-3/8	70-3/8
1970	20	17	85	86-2/8	57-4/8	72-5/8
1971	19	18	95	81-4/8	46-6/8	73-5/8
1972	20	17	85	80-4/8	63-1/8	71-4/8
1973	20	20	100	84-	59-2/8	72-6/8
1974	20	19	95	85-2/8	63-4/8	70-6/8

TABLE V. Summary of Hart Mountain Antelope Hunts

Year	No. Hunters	Successful	% Success	Boone & Crockett Scores High	Low	Average
1968	10	9	90	82	65-6/8	74-5/8
1969	16	15	94	77-6/8	64-2/8	70-3/8
1970	15	15	100	81-6/8	65-2/8	73
1971	14	11	79	75	65-4/8	69-4/8
1972	15	15	100	78-4/8	53	69-7/8
1973	16	13	81	79	57-4/8	68-4/8
1974	15	14	93	81-5/8	53-4/8	69-2/8

Since 1968, 139 hunters have taken 131 antelope on the Sheldon Range for an eight year average success rate of 94%. At Hart Mountain, 101 hunters have taken 92 antelope for a seven year success rate of 91%. The emphasis on a "quality" hunting experience continues to receive favorable comments from all participants.

II. RANGE SURVEYS

A. Weather Conditions

Dry and hot with below normal precipitation was the rule. Although snowpacks at the beginning of the year were near average, precipitation following spring runoff was below average. The summer and long, hot fall were one of the driest on record. Early winter conditions are not much better, with limited soil moisture and below average snowpacks.

B. Range Modification

No new programs were initiated this year. There were no major range fires , thus our activities centered on maintenance of existing facilities.

C. Range Evaluation

Drought conditions prevailed from July into November, concentrating antelope near remaining water supplies. Most forbs and grasses were dessicated by early August, forcing antelope to limited green vegetation present on lakebeds and adjacent browse supplies.

III. MISCELLANEOUS EVALUATIONS

A. Disease

None noted on Hart Mountain or Sheldon. However, there was a suspected loss to Blue Tongue in the captive antelope herd at Malheur National Wildlife Refuge about 60 miles north of Hart Mountain.

B. Predation

None observed or found.

C. Tagging

None.

D. Research

Mr. James Good, former Assistant Manager on Hart Mountain, began his research project entitled "Correlation of Habitat Factors with Pronghorn use on Small Playas in South Central Oregon" in June, 1974. The objectives of his study scheduled for completion in 1976 are:

1. Describe observed use of pronghorns on four lakebed, intermittent lake range sites.

2. Determine if there is a difference in use by pronghorns of the lakebed, intermittent lake range sites.

3. Determine which of five environmental factors can be correlated with pronghorn use on the lakebed, intermittent lake range sites.

Progress reports will be included in future proceedings.

b. Range Modification

No new programs were initiated this year. There were no major range fires, thus our activities centered on maintenance of existing facilities.

c. Range Evaluation

Drought conditions prevailed from July into November, concentrating antelope near remaining water supplies. Most forbs and grasses were desiccated by early August, forcing antelope to limited green vegetation present on lakebeds and adjacent brown supplies.

III. MISCELLANEOUS EVALUATIONS

A. Diseases

None noted on Hart Mountain or Sheldon. However, there was a suspected loss to Blue Tongue in the resident antelope herd at Malheur National Wildlife Refuge about 60 miles north of Hart Mountain.

B. Predation

None observed or found.

C. Poisoning

None.

D. Research

Mr. James Good, former Assistant Manager on Hart Mountain, began his research project entitled "Correlation of Habitat Features with Pronghorn use on Small Plots in South Central Oregon" in June, 1974. The objectives of his study scheduled for completion in 1976 are:

1. Determine observed use of pronghorns on four lakebed, intermittent lake range sites.

2. Determine if there is a difference in use by pronghorns of the lakebed, intermittent lake range sites.

3. Determine which of five environmental factors can be correlated with pronghorn use on the lakebed, intermittent lake range sites.

Progress reports will be included in future proceedings.

IV. SUMMARY

A. Differences in winter census data indicate we may not be obtaining total herd counts. Herd movement out of the existing census area may be the problem.

B. Buck : doe ratios are up from a year ago, but are still below the six year average.

C. Production ratios (10 kids : 100 adults or 14 kids : 100 does) are the second lowest recorded since 1955. The ratio of kids : adults is anticipated to provide a better measure of production trends because of the difficulty in distinguishing yearling bucks and does from the air.

D. Combined hunter success on Sheldon and Hart Mountain in 1974 was 94%, with 35 hunters taking 33 antelope.

E. Drought conditions prevailed into November, with poor to fair water conditions forecast at the end of the year.

V. RECOMMENDATIONS

A. Hunting - No change.

B. Census - Evaluate mid-winter census efforts and results to resolve differences in total numbers from year to year.

C. Predator Control - No change.

D. Research - One ongoing study in 1975.

IV. SUMMARY

A. Differences in winter census data indicate we may not be obtaining total herd counts. Herd movement out of the existing census area may be the problem.

B. Buck : doe ratios are up from a year ago, but are still below the six year average.

C. Production ratios (DU kids : 100 adults or 1% kids : 100 does) are the second lowest recorded since 1972. The ratio of kids : adults is anticipated to provide a better measure of production trends because of the difficulty in distinguishing yearling bucks and does from the air.

D. Combined hunter success on Sheldon and Deer Mountain in 1974 was 94%, with 35 hunters taking 33 antelope.

E. Drought conditions prevailing into November, with poor to fair water conditions forecast at the end of the year.

V. RECOMMENDATIONS

A. Hunting - No change.

B. Census - Evaluate mid-winter census efforts and results in regard to differences in total numbers from year to year.

C. Predator Control - No change.

D. Research - Due ongoing study in 1975.

CLEAR LAKE NATIONAL WILDLIFE REFUGE
ANTELOPE POPULATION NOTES FOR 1974

By: Edward J. O'Neill, Biologist
U.S. Fish and Wildlife Service, Tulelake, Ca.

Clear Lake Refuge and particularly the 5,500 acre Peninsula Unit saw comparatively good spring weather and range in 1974; however, by late July conditions took a turn for the worse with hot, dry days and little precipitation. Green forbes became scarce in August and September except along some six miles of moist sandy shoreline.

High population census was made in early April when 180 adult pronghorns were on the refuge unit. July production census turned up a total of 130 animals on the Peninsula (16 adult bucks, 74 does, 40 kids).

The 1974 season marked the 11th consecutive year of managed hunting on the refuge unit in cooperation with California Fish and Game Department (not more than 5 hunters permitted at any time until a designated total number of bucks are taken whether in one day or the entire season). State personnel manned the check station and patrol was by Fish and Wildlife Service refuge personnel.

A total of 11 bucks were removed from the Peninsula Unit herd. An additional 8 bucks were reported taken from the north, west and east shoreline sections of Clear Lake Refuge.

A long-standing cattle grazing permit on the U-peninsula continued in effect with 650 AUM's (July 15 to November 15) as coordinated between U.S. Forest Service and Bureau of Reclamation.

CLEAR LAKE NATIONAL WILDLIFE REFUGE
WATERFOWL REPRODUCTIVE NOTES FOR 1974

By: Edward J. O'Neill, Biologist
U.S. Fish and Wildlife Service, Tulelake, Ca.

Clear Lake Refuge and particularly the 5,500 acre Peninsula Unit saw comparatively good spring weather and rains in 1974; however, by late July conditions took a turn for the worse with hot, dry days and little precipitation. Crown forbes became scarce in August and September except along some six miles of point sandy shoreline.

High population census was made in early April when 180 adult pronghorns were on the refuge unit. July production census turned up a total of 120 animals on the Peninsula (16 adult bucks, 74 does, 30 kids).

The 1974 season marked the 11th consecutive year of managed hunting on the refuge unit in cooperation with California Fish and Game Department (not more than 5 hunters permitted at any time until a designated total number of bucks are taken whether in one day or the entire season). State personnel manned the check station and patrol was by Fish and Wildlife Service refuge personnel.

A total of 11 bucks were removed from the Peninsula Unit herd. An additional 8 bucks were reported taken from the north, west and east shoreline sections of Clear Lake Refuge.

A long-standing cattle grazing permit on the U-peninsula continued in effect with 550 AUM's (July 15 to November 15) as coordinated between U.S. Forest Service and Bureau of Reclamation.

A periodic range evaluation-trend survey was conducted during the summer soliciting cooperation of Modoc Forest and Bureau of Reclamation. The transect surveys indicated improvement in forage since the 1962 survey.

One item of concern on Clear Lake Refuge was the loss of 17 antelope (2 bucks, 11 does, 4 kids) and 3 mule deer (2 does, 3 fawns). Period of loss was placed at sometime between September 5 and 10. The animals were all too deteriorated for pathological study when discovered. Field examination disclosed all had varying amounts of food in the stomachs at time of death, no indication of harassment (aircraft, predators)or inflicted death. None had been visited even by predators or scavengers. All were scattered over about 3-1/2 miles of shoreline situated within 25 to 150 feet of the water. Mud on the feet suggested each had been drinking just prior to death. In view of the unusually heavy skum along the shoreline, samples were submitted for tests of toxicity but the probability was considered low by Oregon State University. Reviewing coincidental losses of California Bighorns at Lava Beds National Monument, Tulelake, California, we speculated as to whether or not bluetongue virus disease or catarrhal sheep fever was involved since suspected transmitting gnats (Hippelates) are common at Clear Lake. At least one local band of domestic sheep were affected by bluetongue during 1974. Previously mule deer in the general area were found infected (Dr. T.P. Kistner, O.S.U.).

It is hoped bluetongue doesn't become a major factor, however, we mention the incidence so others might be aware of the possibility.

(Mr. Eldon McLaury commented that one pronghorn found in the Malheur National Wildlife Refuge enclosure at Burns, Oregon, last summer was examined at O.S.U. and suspected of having bluetongue. Both O.S.U. and U.S.D.A. Animal and Plant Veterinary Services Diagnostic Lab confirmed bluetongue in at least one bighorn sheep from Lava Beds).